

# Nabi Goudarzi

Ph.D, P.Eng.



2446 Bank Street, Suite 723  
Ottawa, Ontario  
K1V 1A4

## EDUCATION

Doctor of Philosophy in Structural Engineering (2016)  
University of Alberta, Edmonton, Alberta

Master of Science in Earthquake Engineering (2009)  
Sharif University of Technology, Tehran, Iran

Bachelor of Science in Civil Engineering (2006)  
University of Science and Technology, Tehran, Iran

## PROFESSIONAL REGISTRATION

Registered Professional Engineer in Ontario since 2019  
Registered Professional Engineer in Alberta since 2018  
Registered Professional Engineer in Nova Scotia since 2020  
Registered Professional Engineer in New Brunswick since 2020  
Registered Profession in Newfoundland and Labrador since 2020

## TECHNICAL AFFILIATIONS

American Concrete Institute (ACI)  
Canadian Society for Civil Engineering (CSCE)  
The Masonry Society (TMS)  
Precast Concrete Institute (PCI)

## SKILLS AND EXPERTISE

- Structural design of Structures to Canadian Codes; Wood (CSA O86), Steel (CSA S16), Code Formed Steel (CSA S136), Concrete (CSA A23.3), Masonry (CSA S304)
- Seismic retrofitting of structures with FEMA 356 and ASCE/SEI 41
- Vibration damage analysis
- Using analysis and design Software: SAP2000, ETABS, SAFE
- Using drafting software: AutoCAD and Revit

## PROFESSIONAL EXPERIENCE

Nabi specializes in the forensic structural investigation of buildings and the design of retrofitting schemes for damaged or under-designed structures. In the course of his career, Nabi has conducted structural assessments of existing steel, concrete, masonry and wood buildings under gravity loading, vibration and seismic forces. He has also designed steel and concrete structures, including high-rise residential and office towers, commercial retail units, and long-span steel trusses. Nabi holds a MSc. in Earthquake Engineering from Sharif University of Technology and a Ph.D. in Structural Engineering from the University of Alberta.

### July 2019 to present

Forensic Structural Engineer, *Origin & Cause Inc.*  
Ottawa, Ontario (Servicing Eastern ON, NS, NB)

- Conduct site examination to determine the extent of damage due to fire, wind, impact and snow
- Determined the cause of damage to the roof of five houses after the winter of 2019 and provided structural drawings for repair, Sudbury, ON
- Determined the extent of damage to a house after a fire, Ottawa, ON
- Prepared partial reconstruction drawings for a house damaged in a fire, Ottawa, ON
- Provided repair drawings to a row house damaged in a fire, Ottawa, ON

- Determined the extent of damage to a steel industrial building after a fire, Cornwall, ON
- Determined the extent of damage to a house due to tree impact and gave repair recommendations, Ottawa, ON
- Determined the extent of damage to a house due to tree impact and gave repair recommendations, Halifax, NS
- Determined the cause of damage to basement wall of a house after Hurricane Dorian, Pugwash, NS.
- Determined the cause of damage to the sea wall of a house after Hurricane Dorian, Halifax, NS
- Determined the cause of damage (wind or wave) to dock after Hurricane Dorian, Halifax, NS
- Determined the extent of wind damage to a steel framed industrial shelter, Kingston, ON
- Determined the cause of roof collapse of a barn, Smiths Falls, ON

#### May 2016 to July 2019

Structural Design Engineer, **RJC Engineers**  
Edmonton, Alberta

- Performed load assessments for existing buildings and provided retrofitting schemes for under-designed structures
- Designed various structural members including shear walls, concrete slabs, columns, beams, deep and shallow concrete foundations

#### September 2011 to May 2016

Teaching and Research Assistant, **University of Alberta**  
Edmonton, Alberta

- Taught laboratory sections for different courses including Mechanics of Deformable Bodies (CivE270), Civil Engineering Analysis II (CivE295)
- Graded papers for Dynamics of Structures
- Prepared research papers for publication
- Prepared and gave presentations for technical conferences
- Conducted research on insulated concrete panels

#### July 2008 to April 2011

Design Structural Engineer, **World Highrise Structures**  
Tehran, Iran

- Conducted site visits to collect information on structural members and connections of existing steel, concrete and masonry schools
- Modeled and analyzed the existing structure of schools and assess their capacity to resist seismic forces
- Proposed retrofitting schemes for under-designed schools
- Prepared drawings for retrofitting schemes

#### PROFESSIONAL DEVELOPMENT

- Edmonton Wood Design Workshop, Canadian Wood Council, February 28, 2018
- Performance-Based Seismic Design of Tall Reinforced Concrete Buildings, Canadian Society of Civil Engineers (CSCE), January 25, 2019
- Construction Contract Administration, Construction Specifications Canada, March 2017
- Principles of Construction Documentation, Construction Specifications Canada, November 2016
- Part 9 The House Building Envelope, George Brown College, July 2019
- Hilti Seminar, Hilti, April 3, 2019

- Architectural Anchoring Systems, Halfen, June 14, 2018

#### AWARDS AND SCHOLARSHIPS

- Harry Edward Sim Memorial Scholarship, 2014 and 2012
- Vision in Leadership, Awarded by Residence Halls Association of Univ. of Alberta, March 2014
- Outstanding Community Builder, Awarded by Residence Halls Association of Univ. of Alberta, March 2014
- Annual Scholarship by the Canadian Precast/Prestressed Concrete Institute, August 2013
- Industrial Post-graduate Scholarship (IPS) by Natural Resources & Engineering Sciences (NSERC), 2012-2014
- Academic Leaderships, Awarded by Residence Halls Association of Univ. of Alberta, April 2012

#### PUBLICATIONS

- Goudarzi, N., Korany, Y., Adeeb, S., Cheng, R. (2016) "Characterization of the Shear Behaviour of Z-Shape Steel Plate Connectors Used in Insulated Concrete Panels," PCI Journal, V. 61, March-April.
- Goudarzi, N., Hatzinikolas, N., Korany, Y. (2014) "Out-of-Plane Behaviour of Precast Concrete Sandwich Wall Panel Systems," 4<sup>th</sup> Annual International Conference on Civil Engineering, Athens Institute for Education and Research (ATINER), Athens, Greece, May26-29.
- Goudarzi, N., Korany, Y. (2013) "A review of the design and construction of masonry noise barrier systems," 12<sup>th</sup> Canadian Masonry Symposium, Vancouver, BC, Canada, June 2-5.
- Goudarzi, N., Vafakhah, H., Korany, Y. (2013). "Investigation of post-cracking behavior of masonry structures retrofitted with CFRP," Structures Congress, Pittsburgh, Pennsylvania, U.S., May 2-4.
- Moghaddam, H., Goudarzi, N. (2010) "Transverse resistance of masonry infills", ACI Structural Journal, V. 107, No. 4, pp. 461-467